

2002-2003 Pollution Prevention

Annual Report



*Office of Pollution Prevention
and Technical Assistance*

(800) 988-7901

www.IN.gov/idem/oppta

February 2004



Dear Constituents:

I am pleased to submit IDEM's 2003 Annual Report on Pollution Prevention in Indiana.

The establishment of the Office of Pollution Prevention and Technical Assistance (OPPTA) has allowed IDEM and our partners, the Indiana Clean Manufacturing Technology and Safe Materials Institute, the Clean Manufacturing Technology Board and the Indiana Partners for Pollution Prevention, to work with Indiana's manufacturers to incorporate pollution prevention into their everyday operations, as well as into their long-term planning.

A draft version of this report was released on December 29, 2003, and made available for public comment for 45 days. This final report responds to the public comments received during this period. This report, covering the time period of January 1, 2002, through October 31, 2003, represents a time of change for OPPTA, our associational partners and our manufacturing partners. Together, we faced the challenges of a slowed economy, and learned to do more with fewer resources.

This partnership realized a number of successes in 2003. We were recognized as a national leader in using pollution prevention to reduce styrene emissions. A decade of efforts to reduce the use of methylene chloride paid off with a 73% decline in emissions. We also achieved significant reductions in carcinogenic chemical releases. I say "we" because this progress was possible through the partnerships OPPTA has nurtured and seen grow exponentially since being established in 1990.

I.C. 13-27-6 requires IDEM to prepare an annual report describing the state's pollution prevention activities to the Indiana General Assembly. These activities are vast in scope and powerful in their impact on Indiana's industries, citizens and environment. OPPTA staff are dedicated to helping Hoosier businesses understand and apply pollution prevention practices in practical, economical, and often cost-saving ways.

While tremendous progress has been made, many opportunities remain. Over the next year, OPPTA will work with partners across the state to improve on this progress. We will see the results of the Governor's Toxic Reduction Challenge and develop a new voluntary pollution prevention challenge for Indiana. Efforts to promote regulatory integration of pollution prevention will continue within the agency. And, new efforts to reduce toxic releases will occur. I am confident our partnerships will enable us to continue to build industry support and involvement in pollution prevention. Together, we will make Indiana a cleaner, healthier place for all Hoosiers.

Sincerely,

A handwritten signature in black ink that reads "Lori F. Kaplan". The signature is written in a cursive, flowing style.

Lori F. Kaplan
COMMISSIONER

Table of Contents

Introduction

Pollution Prevention in a Changing Economy	1-2
---	-----

Chapter 1

IDEM's Pollution Prevention Outreach Initiatives	3
---	---

Pollution Prevention Regulatory Integration Efforts	3
--	---

- Reinforced Plastic Composites
Fabricating Rule 3-4
- Wastewater Treatment Plant
Operator Certification Program 4-5

Governor's Toxic Reduction Challenge	5-7
--	-----

Sector and Chemical Specific Outreach	7
---	---

- Auto Salvage Facility Sector Project 7
- Collision Repair/Automotive Refinishing . 7-8
- Diesel Idling 8
- Drycleaners 8
- Environmental Health 8
 - Asthma 8-9
 - National Asthma Plan 9
 - Indiana Joint Asthma Coalition 9
 - Child Care 9-10
 - Integrated Pest Management 10
 - Lead 10
 - Tools for Schools Initiative 10-11
- Hospital Initiative 11
- Mercury 11
 - Mercury Spill Guidance 12
 - Dental Office Initiative 12
 - Mercury Deposition Program 12
 - Mercury Awareness Program 12-13
 - Mercury Thermostat Reduction
& Recycling Pledge Program 13
 - Mercury Thermometer Exchanges 13
- Metal Finishers 13

- Publicly Owned Treatment Works 13
 - Local Wastewater Treatment
Assistance Efforts 13-14
 - Publicly Owned Treatment Works
Mercury Outreach 14
- School Clean Sweeps Program 14
- Southwest Indiana Illegal
Burning Campaign 14-15
- Vehicle Maintenance 15

IDEM's Pollution Prevention Partnerships	15
--	----

- Clean Manufacturing Technology
Board and Institute 15
- Department of Defense
Pollution Prevention Partnership 15
- Kentuckiana Pollution Prevention
Project 15-16
- National Environmental Performance
Track Program 16
- Indiana Partners for
Pollution Prevention 16-17
- National Waste Minimization Program 17
- WasteWise 17-18

Governor's Awards for Environmental Excellence Program	18
---	----

Greening the Government	19
-------------------------------	----

Pollution Prevention Training for OPPTA Staff	19-20
--	-------

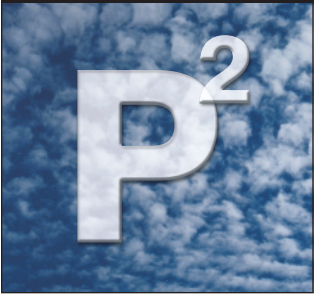
Indiana Materials Xchange	20
---------------------------------	----

Chapter 2

Measuring Pollution Prevention Progress in Indiana	21
---	----

Pollution Prevention Assistance Survey Results	21-24
---	-------

Toxic Release Inventory Results	24-25
---------------------------------------	-------



Pollution Prevention in a Changing Economy

Whether Hoosier businesses are striving to improve worker safety, decrease regulatory requirements, or improve product quality, implementing pollution prevention strategies can offer many benefits throughout the life of a business or organization. Of course, the benefit we watch most closely at the Indiana Department of Environmental Management (IDEM) is the direct effect pollution prevention measures have on our environment.

This report provides a brief overview of IDEM's pollution prevention efforts over the past two years and their impact on Indiana's environment. Indiana statute (IC 13-27-2) tasks the Office of Pollution Prevention and Technical Assistance (OPPTA) with integrating pollution prevention as a voluntary option into the regulatory process, providing technical assistance, maintaining a technical resource center, and conducting broad-based educational programs. Other IDEM offices have also implemented pollution prevention and sustainability initiatives, contributing to IDEM's core goal of improving Indiana's environment. The Office of Planning and Assessment (OPA) manages several pollution prevention outreach efforts, and the Offices of Air Quality, Land Quality, Water Quality, and Enforcement continue to find success with pollution prevention through regulatory integration in new rules and enforcement settlements. IDEM continues to work in partnership with industry, local government, academia and citizens to further the pursuit of pollution prevention in Indiana. Despite economic challenges, IDEM has met the need to become more creative and efficient as it works to make Indiana a cleaner, healthier place to live.

The past two years have been a time of change for OPPTA, as they have for businesses across Indiana. The slowing economy has created new challenges for all, and OPPTA has learned to successfully manage increased demands with fewer resources. With the recent elimination of its Operations Branch, OPPTA is now an office of three branches: Voluntary Compliance, Pollution Prevention, and Source Reduction and Recycling. The duties and functions of the former Operations Branch have been absorbed and incorporated into the remaining branches. In addition, total OPPTA staff has been reduced from 26 in 2001 to 19 in 2003, a 27 percent decrease. OPPTA has continued to further its mission of reducing pollution prevention barriers, providing incentives for pollution prevention, and measuring statewide pollution prevention progress.



Long standing, successful programs, including the Governor's Awards for Environmental Excellence, the 5-Star Environmental Recognition Programs and the Pollution Prevention Annual Conference, have continued to develop and grow. New programs and initiatives, including programs for mercury reduction, integrated pest management, regulatory integration, and diesel idling, have been integrated into IDEM's pollution prevention efforts.

OPPTA's Compliance and Technical Assistance Program (CTAP), which provides confidential pollution prevention and compliance assistance to small businesses through telephone calls, site visits and workshops, has addressed the challenge to do more with less.

As expected with production decreases, Indiana's statewide toxic chemical release total decreased 9 percent from 2000 to 2001. However, pollution prevention efforts by Indiana industries also played a significant role in this decrease. Several industry sectors made significant reductions in releases through pollution prevention technologies and opportunities. In addition, many Hoosier facilities met the Governor's Toxic Reduction Challenge and voluntarily implemented pollution prevention measures to reduce toxic chemical releases at their facilities.

In January 2003, the National Pollution Prevention Roundtable published a 10-year report on the results of national and statewide pollution prevention efforts. The report clearly shows that pollution prevention plays a vital role in successful environmental results and can have very large impacts with minimal investment. Pollution prevention has become an integral part of many IDEM services. Continued efforts need to be made in the area of regulatory integration by increasing the visibility of pollution prevention in permits, rules and enforcement settlements. As successes occur for reductions in toxic chemical releases, doors open for new technology and opportunities for further reductions. Increased efforts to build stronger partnerships with industry, community and others for voluntary reductions at local levels, as well as improved methods of measuring pollution prevention successes, must occur. Finally, OPPTA will continue to promote proven pollution prevention methods for all to implement.

IDEM's Pollution Prevention Outreach Initiatives

Pollution Prevention Regulatory Integration Efforts

For the past four and a half years, IDEM has made a concerted effort to incorporate pollution prevention more fully into its regulatory functions. The effort was funded by a U.S. Environmental Protection Agency (U.S. EPA) Pollution Prevention Incentive for States Grant and built upon prior pollution prevention integration efforts at IDEM.

With the help of the consulting firm Kerr, Greiner, Anderson and April, Inc., IDEM employed a multifaceted approach to its pollution prevention integration efforts. This approach involved developing a senior management steering committee; working with staff, branch, section, and office managers to identify potential pollution prevention (P2) integration projects; and winnowing 10 projects from a list of 36 proposed projects for implementation (see Table A).

Table A

IDEM Pollution Prevention Integration Projects

1. Test P2 Integration in Mercury Policy and Rules.
2. Improve Office of Air Quality/OPPTA Rule Development and Outreach Coordination.
3. Develop P2 in Office of Air Quality Rules and Permits Guidebook.
4. P2 in enforcement.
5. P2 in waste inspections.
6. P2 in water inspections.
7. P2 in air inspections.
8. P2 in remediation.
9. Energy efficiency and alternative P2 technologies for drinking water supply.
10. P2 in wastewater treatment operator certification.

Each of the 10 pollution prevention integration projects went through screening and review at the IDEM office level and by the senior management steering committee. Once the steering committee approved projects, senior managers identified project leaders and staff, and the project teams prepared detailed project work plans that included task descriptions, staffing requirements, performance measures, timelines and training needs.

IDEM began implementing the projects in 2001, with some beginning in the spring and others in the summer and fall. Additional information on these projects is available on IDEM's Web site at www.IN.gov/idem/oppta/p2/integration/. Below are two very successful projects that resulted from the pollution prevention integration project.

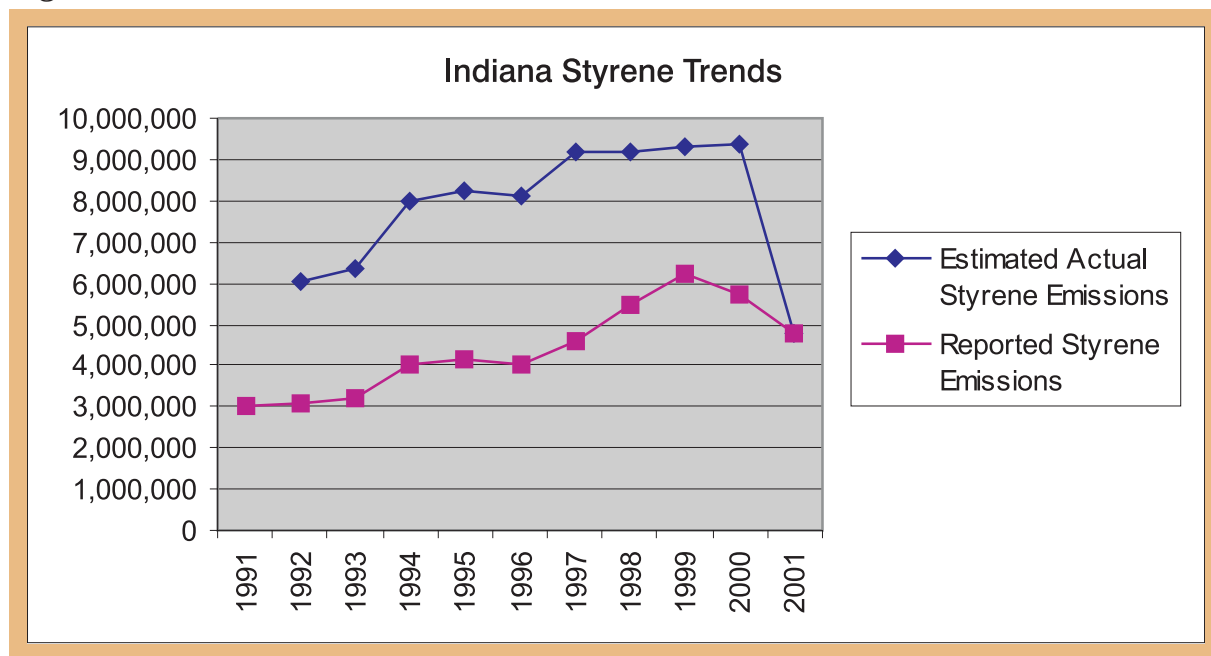
■ Reinforced Plastic Composites Fabricating Rule

Styrene is a toxic chemical that evaporates quickly when exposed to air and is linked to a variety of human health and environmental problems. It is a hazardous air pollutant which U.S. EPA classifies as a possible human carcinogen and which also contributes to the formation of ground-level ozone. Styrene is used by manufacturers of fiber-reinforced plastic, a product used to produce recreational vehicles, campers, boats and truck caps. North central and northeastern Indiana are home to a large number of industries that manufacture fiber-reinforced products. Facilities in five counties in these areas account for more than 80 percent of the styrene releases in Indiana. More than 40 percent of Indiana's styrene releases are reported in Elkhart County, one of the largest recreational vehicle manufacturing centers in the country.

In 1997, IDEM began a styrene reduction initiative focusing on pollution prevention techniques. By 2001, IDEM finalized a styrene rule with the assistance of the industry, which enabled them to use pollution prevention to reduce styrene emissions. The Clean

Manufacturing Technology and Safe Materials Institute (CMTI) at Purdue University provided training and research to assist industry as the new technologies were implemented. Staff from CMTI trained more than 400 employees from 44 Indiana fiber-reinforced plastic manufacturing facilities. As a result of efforts undertaken by IDEM, CMTI, the industry and others, Indiana's styrene releases dropped from about 8 million pounds in 1996 to less than 5 million pounds in 2001 (see Figure 1).

Figure 1



Outreach in this industry sector continues. The National Emission Standards for Hazardous Air Pollutants for this sector were recently finalized. IDEM has been providing assistance to the industry on the new rule and is currently accepting comments on combining the state rule with the new federal rule for the same sector. CMTI's Coating Applications Research Laboratory has since been involved in developing factors for calculating styrene emissions for the industry and continues testing new clean manufacturing technologies to reduce styrene emissions.

Indiana's styrene efforts were recognized by the National Pollution Prevention Roundtable from 150 applicants as a project to appear in the P2 Regulatory Integration Case Study resource tool commissioned by U.S. EPA's Office of Pollution Prevention and Toxics. This successful outreach program has become an ongoing example of how regulators and industry can work together using pollution prevention to achieve measurable, cost effective results. For more information on Indiana's styrene initiative, visit IDEM's Web site at www.IN.gov/idem/ctap/fiber/.

Wastewater Treatment Plant Operator Certification Program

Wastewater treatment plants are responsible for a variety of activities that could affect the environment, including treatment, analysis and discharge. Pollution prevention opportunities exist in the day-to-day processes at the plant, and there are also many educational opportunities for plant officials to teach their peers about pollution prevention. To encourage plants to implement these ideas, IDEM incorporated

the concepts of pollution prevention into the Wastewater Treatment Plant Operator Certification Program.

All wastewater treatment plants must have at least one certified operator in charge of supervising the plant's operations.

Certification is also required for pretreatment operators at facilities discharging to publicly owned treatment works. In addition, some wastewater treatment plants require all operators to pass the certification exam to retain their jobs. Because less than half of those taking the exam pass on their first attempt, the exam is a major training component for wastewater treatment operators.

Several steps were taken to implement this project, including dedicating a portion of each certification exam to pollution prevention questions. The level of expected understanding is graduated to be consistent with the various levels of professional certification. Pollution prevention reference materials are provided to those studying for the certification exam and a portion of the Wastewater Operator Certification Manual now contains pollution prevention information. To date, more than 1,500 wastewater treatment plant operators have received the pollution prevention training. This project was also recognized by the National Pollution Prevention Roundtable and will appear in

the P2 Regulatory Integration Case Study resource tool commissioned by U.S. EPA's Office of Pollution Prevention and Toxics. For additional information, visit IDEM's Web site at www.IN.gov/idem/water/compbr/compeval/wwcert.html.

Governor's Toxic Reduction Challenge

On April 24, 1998, former Governor Frank O'Bannon announced the Governor's Toxic Reduction Challenge. The challenge was made to Indiana businesses to support the state's goals to reduce toxic chemical releases to air and water using 1995 Toxic Chemical Release Inventory (TRI) data as a baseline. The Challenge included three goals:

- ① Achieve a 50 percent reduction, by December 31, 2000, in the amount of carcinogens and persistent, bioaccumulative toxic (PBT) compounds released to air and water in large urban areas of the northwest, northern, central and southwestern regions of the state.
- ② Achieve a 60 percent reduction in the total amount of carcinogens and PBTs released statewide, by December 31, 2002.
- ③ Achieve a 50 percent reduction in all chemicals reported to TRI statewide, by December 31, 2002.

PBT pollutants are chemicals that are toxic, persist in the environment and bioaccumulate in food chains, and thus pose risks to human health and ecosystems. PBTs transfer easily among air, water and land, and span boundaries of programs, geography and generations. Carcinogens are those chemicals that are either known to be a human carcinogen or are reasonably anticipated to be human carcinogens. In 2001, more than 11 percent of all toxic releases in Indiana were known or potential carcinogens.

Seventy-nine facilities voluntarily accepted the Governor's Challenge. Although the program formally ended in December 2002, the final results will not be available until the summer of 2004 when the 2002 TRI data is quality assured. Of the 79 facilities participating in the Challenge, 75 percent, or 59, currently submit TRI reports. Each of the facilities included in Table B were participants in the Governor's Toxic Reduction Challenge and demonstrated the reductions listed for air and water releases of carcinogens and PBT compounds, based on 2001 TRI data.

Since 1995, a number of the original facilities have discontinued reporting to TRI for various reasons, including pollution prevention, dropping below TRI

reporting thresholds and facility closures. However, since that time, facilities have become subject to new, stricter reporting requirements, including lowered thresholds for PBTs, which means many facilities are now required to report chemicals they were not required to report in 1995.

Table B

Governor's Challenge Participants Reporting to TRI

(Largest Reducers of Carcinogens and PBT chemicals)

FACILITY NAME	1995 TO 2001 % REDUCTION
Dana Coupled Products, Inc.	-100%
Johnson Controls, Inc.	-100%
Crown Audio, Inc.	-100%
Carrier Corporation	-99.9%
Best Access Systems	-96.5%
BP Products North America Whiting Marketing Terminal	-96.3%
Gaska Tape Inc.	-95.8%
3M Company - Hartford City Plant	-92.8%
Louisiana Pacific Corporation	-88.5%
Delphi Automotive Systems, LLC, Bypass	-87.2%
Visteon Corporation - Indianapolis Plant	-84.6%
Prodesign Composites	-80.4%
Eli Lilly Tippecanoe Laboratories	-77.0%
GM Powertrain Bedford Facility	-74.7%
Wabash National LP Main Plant	-64.3%
Ispat Inland, Inc.	-62.8%
Coachmen Recreational Vehicle Co. L.L.C.	-56.4%
Whirlpool Corporation	-55.9%
Harrison Steel Castings Co.	-52.4%
Railworks Wood Products, Inc.	-43.8%
GE Plastics MT. Vernon, Inc.	-42.0%
Reilly Industries, Inc.	-41.4%
Knauf Fiber Glass, GMBH	-41.3%
International Truck and Engine Corporation	-40.4%
BP Products North America Whiting Business Unit	-36.9%
General Cable	-34.1%
Arrowhead Plastic Eng. Inc.	-27.6%
Wabash National LP South Plant	-19.3%
GEA BPO LLC	-17.9%
Eli Lilly Technology Center	-15.9%
Eli Lilly Clinton Laboratories	-13.6%

■ Progress Toward Goal One

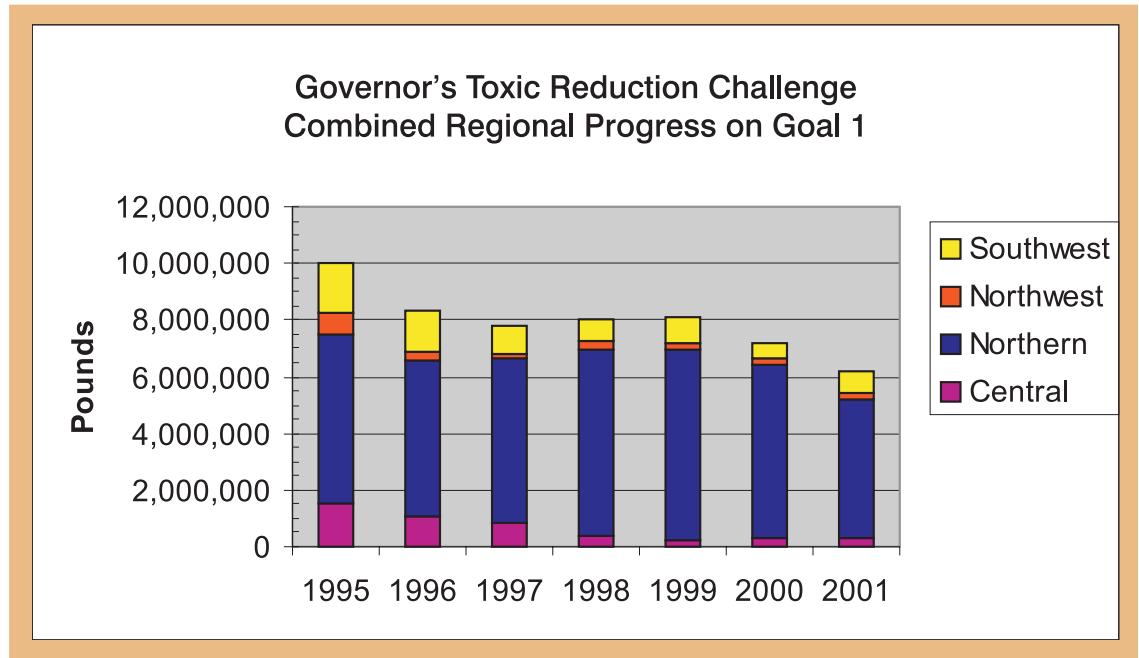
Goal one of the challenge measured air and water releases of carcinogens and PBTs in regions having significant manufacturing activities. These regions encompass the northern, northwest, southwest and central parts of the state. The goal was to achieve a 50 percent reduction by 2001 for those facilities reporting to the Toxic Release Inventory in 1995 in those regions.

Of the four regions, all but one greatly exceeded the 50 percent goal. The northwest and southwest regions made 71 percent and 68 percent reductions by 2001, and central Indiana had the largest

decrease of 82 percent. The northern region reported only an 18 percent reduction. Overall statewide emissions were reduced by 28 percent (see Figure 2). Significant decreases in carcinogen releases from the northern region occurred over the past two years, many due to pollution prevention options available in new regulations to reduce styrene and dichloromethane. Further, 1995 TRI data used incorrect methods for estimating styrene releases, causing these releases to be underestimated by almost half. In 2000 and 2001 data, some facilities began using a more accurate method of calculating styrene emissions. Because there is a mixture of correct and incorrect numbers for styrene in 2000 data, it is difficult to estimate actual styrene emissions. By 2002, all facilities reporting styrene were required to use the new, more accurate factor, thereby making 2002 data the most accurate measure of reductions in releases

for the northern region. The 2002 TRI data will be available in late spring of 2004. Significant decreases in toxic releases in the 2002 Governor's Challenge data for the northern region are anticipated.

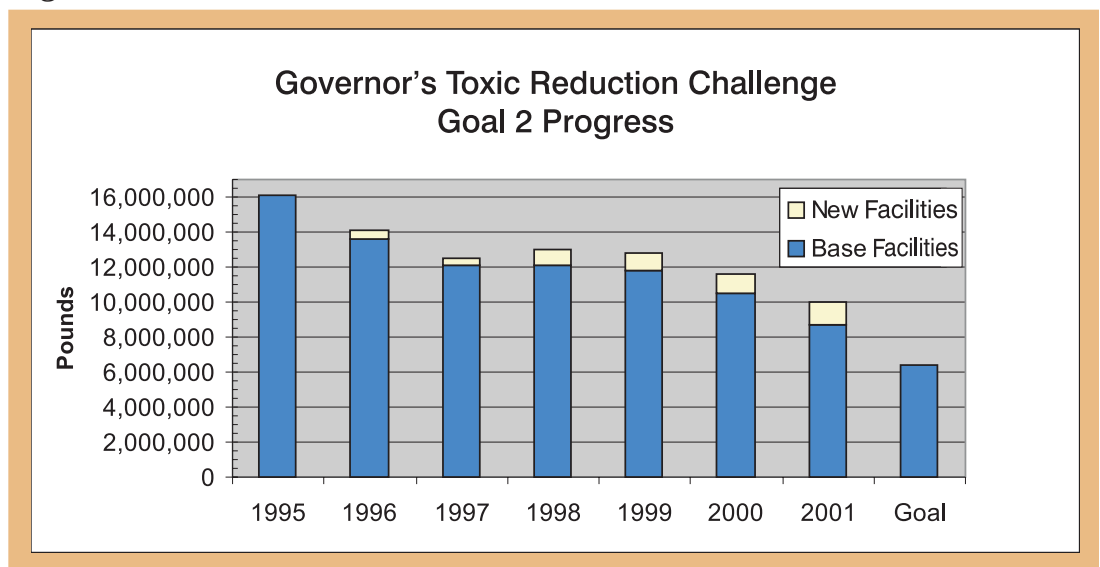
Figure 2



■ Progress Toward Goal Two

Goal two of the challenge measured statewide air and water releases of carcinogens and PBTs. This goal was to achieve a 60 percent reduction by 2003 for those facilities reporting to TRI in 1995. While the data is not final for 2002, 2001 numbers indicate we are on track to meet our goal. In 2001, carcinogens and PBTs were reduced by more than 45 percent (see Figure 3).

Figure 3

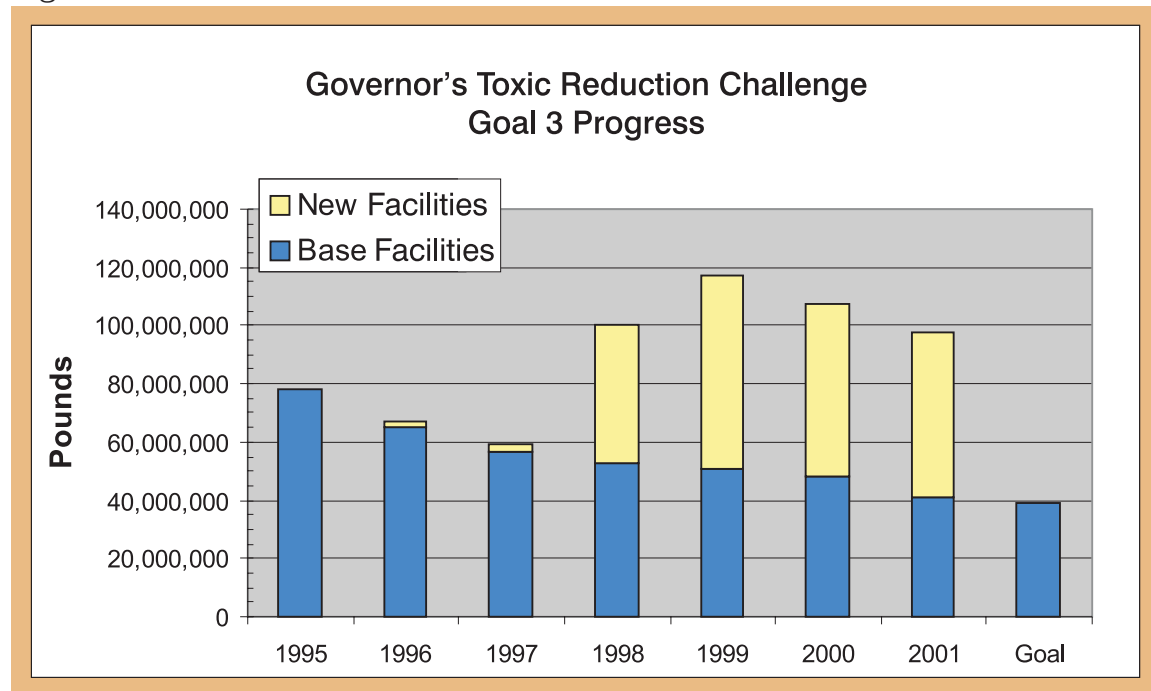


■ Progress Toward Goal Three

For goal three, the challenge was to reduce all toxic chemical releases, beyond carcinogens and PBTs, to the air and water by 50 percent by 2003 for those facilities reporting to TRI in 1995. Based on 2001 data, which represents seven of the eight years of the goal, a 47 percent reduction has already occurred and all indications are that this goal should be met, if not exceeded (see Figure 4).

For additional information about the Governor's Toxic Reduction Challenge or to find out how participants accomplished reductions, please visit IDEM's Governor's Challenge Web page at www.IN.gov/idem/oppta/p2/toxicchallenge.

Figure 4



goal to increase the auto salvage facility sector's compliance with the environmental laws and regulations, thereby reducing the potential for pollution. These facilities routinely deal with many potentially

Sector and Chemical Specific Outreach

■ Auto Salvage Facility Sector Project

Three state agencies combined their efforts to assist auto salvage facility owners as they work to understand the sometimes confusing state laws and rules that govern their operations related to the environment, workers' health and safety, and radiologic issues. IDEM, the Indiana State Department of Health (ISDH) and the Indiana Department of Labor/Bureau of Safety Education and Training (DOL/BuSET) hosted 11 workshops around the state from April through July 2003. Approximately 200 participants including facility owners, county officials, and solid waste management district representatives attended. The workshops introduced the new Compliance Manual for Indiana's Auto Salvage Facilities. While the laws and rules described in the manual and workshops are not new, it is IDEM's



harmful fluids, materials and substances, which if not removed, stored and disposed of properly, can pollute Indiana's air, land and water, and impact worker health and safety.

The educational aspects of this program are ongoing. The inspection phase of this project has begun. It consists of conducting multimedia compliance inspections across the state. Enforcement will be taken, as appropriate. Information about the Auto Salvage Facility Sector Project, including the manual, can be found on IDEM's Web site at www.IN.gov/idem/autosalvage/.

■ Collision Repair/Automotive Refinishing

IDEM has developed a Collision Repair/Automotive Refinishing Compliance Manual to assist businesses in these industries to achieve environmental compliance with all applicable regulations that apply to their business activities, including environmental, worker safety, and fire and building codes. In the spring of 2003, OPPTA provided four workshops to cover the topics in the manual. More than 85 collision repair personnel attended the training to learn more about the environmental regulations affecting them and pollution prevention opportunities they can implement at

their facilities. During 2003, increased cold calls and site visits occurred at collision repair facilities. More than 80 facilities were visited. The manual and other information on this sector can be found on IDEM's Web site at www.IN.gov/idem/ctap/collision.

■ Diesel Idling



IDEM staff in the agency's Northwest Regional Office are participants in the Northwest Indiana Diesel-Related

Emissions Initiative. The goal of the initiative is to reduce diesel-related emissions in Northwest Indiana. According to U.S. EPA, large diesel vehicles can burn up to one gallon of diesel fuel for each hour that they idle. Diesel emissions contain fine particles that, when inhaled, can become lodged in the lungs, causing lung damage including asthma, bronchitis, and even death. Diesel emissions are also a likely human carcinogen.

A workgroup was formed in Northwest Indiana with participants from the trucking and petroleum industries, local businesses and industry, federal, local and state governments, community and environmental interest groups, and concerned citizens. The group identified the concentrated long term idling of heavy-duty diesel vehicles as the greatest priority.

The group is working with Pilot Travel Centers, LLC and IdleAire to construct an Advanced Travel Electrification project on Burr Street in Gary, a severe non-attainment area for ozone. ATE is a new and innovative technology allowing diesel trucks to use electricity from port stations rather than idling. The electric hookup provides central heat and air, telephone service, built-in computer, and high-speed Internet to the trucks for a fee less than the cost of diesel fuel. The emissions reductions occurring from the use of electricity, rather than diesel gasoline, are currently being tracked. The project received funding from U.S. EPA, NiSource/NIPSCO, the Indiana Department of Transportation, and IdleAire.

For information on this project, contact Amy Burns at aburns@dem.state.in.us or (219) 881-6720.

■ Drycleaners

OPPTA's first 5-Star Program, the 5-Star Environmental Recognition Program for Drycleaners, continues to assist that industry with new regulations and

promote pollution prevention, especially related to perchloroethylene (perc) usage. Perc is a toxic chemical that can affect the nervous system and, if exposed to for long periods of time, can cause liver and kidney damage in humans.

IDEM's 5-Star Program originally began in 1995, and currently 70 participating drycleaning facilities take steps to reduce waste and increase awareness of proper perc usage. A compliance assistance manual exists for drycleaners and includes pollution prevention tips as well. OPPTA staff continue to provide drycleaner onsite compliance and pollution prevention assistance. Information about this sector is available on IDEM's Web site at www.IN.gov/idem/ctap/cleaners/5stindex.html.

■ Environmental Health

IDEM established its "Protecting Children from Environmental Threats" initiative to focus on children's health and enhance children's protection from environmental hazards. The initiative gives IDEM the opportunity to refocus on one of the ultimate objectives of our environmental protection programs: protecting the health of children.



The children's initiative is a part of former Governor Frank O'Bannon's "Building Bright Beginnings" program. This multi-agency program focuses on children younger than six years of age. IDEM realizes children are not little adults. Their bodies are more sensitive to chemicals and their activities may result in more dangerous and unanticipated exposures. There are many pollution prevention efforts that can be achieved to reduce environmental health threats to children. Described below are several IDEM efforts.

● Asthma



As a part of the Children's Environmental Health Program, IDEM

partnered with the Indiana State Department of Health (ISDH) to address Indiana's asthma concerns from both the health and environmental perspective. National data shows the

prevalence of asthma in children has risen in the past 20 years and has become a significant medical problem. According to the ISDH's Behavioral Risk Factor Surveillance System report for 2000, Indiana generally has a higher percentage of people suffering from asthma than the national median. As a result, IDEM has several initiatives addressing asthma.

○ *National Asthma Plan*

In 2002, IDEM staff served on the steering committee for an asthma project sponsored by the Environmental Council of the States, in cooperation with the Association of State and Territorial Health Officials (ASTHO) and the state of Alaska, with funding assistance from U.S. EPA and the Centers for Disease Control and Prevention. The steering committee, comprised of representatives of state health and environmental agencies, was tasked with developing a vision statement and action items to identify steps states can take to address indoor and outdoor environmental factors that contribute to asthma in children.

The result was the development of an agenda that identifies opportunities for state actions and recommendations for actions by others. This agenda covers seven areas: (1) enhancing coordination and joint activities; (2) actions and practices for homes; (3) actions and practices for schools; (4) actions and practices for outdoor environments; (5) collection, use and integration of data; (6) research; and (7) implementation and future actions. A copy of ASTHO's "Catching Your Breath" report is available on the Web at www.astho.org/pubs/CatchingYourBreathReport.pdf.

○ *Indiana Joint Asthma Coalition*

IDEM and ISDH have combined a public health and an environmental approach to address asthma by developing the Indiana Joint Asthma Coalition. An internal planning committee, with representatives from ISDH and IDEM, was kicked off May 2003. The Centers for Disease Control and Prevention's National Center for Environmental Health has funded Indiana to create a state action plan prior to implementing activities to decrease the burden of asthma. U.S. EPA has funded Indiana to develop a patient education tool addressing environmental triggers of asthma. Both of these tandem projects will span an 18-month period from May 2003 to September 2004.

The five areas of focus for InJAC are:

- Data and surveillance;
- General public and consumer education;

- Health care provider;
- Environmental quality; and
- Children and youth.

● **Child Care**

The 5-Star Environmental Recognition Program for Child Care Facilities recognizes facilities that go above and beyond the requirements of environmental, health and safety regulations. Facilities can earn one, three or five stars based on how they address lead, radon, asbestos, pesticides, mercury, indoor air quality, fire safety, recycling, energy efficiency and environmental education. Currently, more than 57 Hoosier child care facilities are participating in the program, protecting an estimated 3,329 children from environmental threats.



In February 2002, the 5-Star Program received a national award from The Council of State Governments. Former Indiana First Lady Judy O'Bannon accepted CSG's Innovations Award on behalf of the state at a recognition ceremony. CSG's Innovations Awards Program is the only one of its kind in the nation that focuses exclusively on state programs and policies, and selects winners based on evaluations by state government officials. Each year, CSG selects state programs and policies that represent the best approaches in the nation to solving significant problems within state government. Indiana emerged the winner from more than 350 applications submitted for consideration in 2001.

In 2002, a grant from U.S. EPA provided funding for 25 lead risk assessments at low income child care facilities interested in participating in the 5-Star Program. These assessments resulted in the identification and cleanup of lead contaminated dust, paint, soil and water at several child care facilities.

Also in the fall of 2002, seven child care facilities were provided 1,265 digital thermometers from Cinergy and Eli Lilly to distribute to low income families. Many of the families had no thermometer at all or exchanged a mercury thermometer for a digital thermometer. One unexpected result included an educational program with a migrant worker community. A doctor and interpreter were on site to teach parents how to properly use fever thermometers and about the dangers of mercury in various household products, including thermometers.

A newsletter providing environmental health information continues to be published for participating child care facilities, and training videos are still available. The child care manual, "Protecting Children From Environmental Health Threats: Guidance for Indiana's Child Care Facilities," is no longer available in hard copy but is on IDEM's Web site. Information on this program can be found at www.IN.gov/idem/kids/5star/.

● Integrated Pest Management

Integrated Pest Management is an ecological approach to pest management that uses chemical and non-chemical methods for reducing pests and pesticides. IDEM funded an IPM school and child care pilot project with a partnership between Indiana University's School of Public and Environmental Affairs, Purdue University's Department of Entomology, and the Monroe County Community School Corporation. The goal of the project was to develop IPM pilot models in three Indiana school corporations and four Indiana child care facilities. Through this grant, on-site assistance was provided to more than 100 schools and child care facilities participating in the pilot program. Free workshops for school administrators and child care directors were held throughout Indiana. Finally, IPM materials were developed and distributed throughout the course of the project.



A report has been developed that briefly describes the project objectives, implementation and outcomes, and concludes with a summary of lessons learned. The report can be found on IDEM's Web site at www.IN.gov/idem/envirohealth/documents/ipm_exec_sum.pdf.

For more information, visit the Web at www.IN.gov/idem/envirohealth/ipm.html or www.entm.purdue.edu/entomology/outreach/schoolipm/.

● Lead

IDEM continues to partner with ISDH for lead initiatives. During the past two years, IDEM focused on lead issues related to child care facilities and assisting local health departments and community action programs with lead projects.

IDEM, utilizing funds from U.S. EPA, awarded six grants of \$5,000 each that were used for educating families with children at risk of having elevated blood lead levels. The goal of this educational outreach was

to help families reduce their exposure to lead. The grantees selected were:

- Community Action of Greater Indianapolis;
- Marion County Health Department;
- St. Joseph County Health Department;
- Howard County Health Department;
- Action, Inc. of Delaware and Grant Counties; and
- Allen County Health Department.

Each of the objectives in these grants focused on primary prevention for lead poisoning, developing partnerships/networks focusing on sustainability, and providing education/outreach for families at risk for lead poisoning.

In 2002, a grant from U.S. EPA provided funding for 25 lead risk assessments at low income child care facilities interested in participating in the 5-Star program. These assessments resulted in the identification and cleanup of lead-contaminated dust, paint, soil and water at several child care facilities. In the spring of 2003, an agreement was reached with ISDH to continue providing free analysis of lead samples taken during lead risk assessments performed by IDEM staff at child care facilities applying to the 5-Star program.

For more information about the hazards of lead, visit IDEM's Children's Environmental Health Initiatives Web site at www.IN.gov/idem/envirohealth/lead.html or ISDH's Web site at www.IN.gov/isdh/programs/lead/.

● Tools for Schools Initiative

U.S. EPA awarded IDEM a \$30,000 grant to provide Hoosier schools with resources they need to address and improve indoor air quality through a program called Tools for Schools. The program helps schools carry out a plan of action to improve indoor air quality and provides an information toolkit. The materials in each kit include: indoor air quality checklists for teachers, health professionals and facility managers; an indoor air quality management plan; problem-solving tools; and sample memos and policies to aid in the implementation of new programs.

The program is focused on indoor air quality in schools because poor indoor air quality can cause illness, resulting in absence from school and acute health symptoms that decrease performance while in school. Recent data suggest that poor indoor air quality can reduce a person's ability to perform specific mental tasks requiring concentration, calculation or memory. Indoor air temperature and relative humidity can also affect health and performance directly, and

influence a child's performance indirectly by influencing the airborne level of molds and bacteria.

For schools that make a commitment to implement the Tools for Schools program, IDEM provided incentive grants of \$200 to each school to allow them to purchase items that will begin to make changes to improve indoor air quality at the school. To get the word out about the Tools for Schools program and the grants, IDEM held workshops throughout the state. Table C shows schools that have taken advantage of the program.

Table C

Indiana Schools Participating in Tools for Schools	
COUNTY	SCHOOL
Allen	Village Elementary, Fort Wayne
Bartholomew	Hauser Jr./Sr. High School, Hope
Blackford	Hartford City Middle School, Hartford
Clinton	Clinton Central School, 2nd Building, Michigantown Clinton Central School, Michigantown
Dubois	Southern Indiana Education Center, Jasper
Fountain	Covington Elementary, 2nd Building, Covington Covington Elementary, Covington
Lake	Northwest Indiana Educational Service Center, Hope
Putnam	Tzquanaksis Intermediate, Greencastle West Central Indiana Educational Service Center, Greencastle
Steuben	Hendry Park Elementary, Angola Ryan Park Elementary, Angola
Tippecanoe	Wabash Valley Education Center, West Lafayette

For additional information on Tools for Schools, visit IDEM's Web site at www.IN.gov/idem/envirohealth/toolsforschools.html.

Hospital Initiative

In 2000, OPPTA began its Hospital Mercury Free Pledge Program. In 2002, OPPTA joined Hospitals for a Healthy Environment (H2E) as a Champion for Change and transitioned our mercury pledge program

into the H2E Making Medicine Mercury Free Award. This award is given to Partners for Change who have virtually eliminated mercury from their facilities and implemented policies to ensure mercury elimination continues. Through 2003, nine Indiana hospitals joined H2E as Partners for Change, four of which have gone on to receive the Making Medicine Mercury Free Award. OPPTA and Indiana's H2E partners are working toward the goals set forth in the memorandum of understanding between U.S. EPA and the American Hospital Association: virtual elimination of mercury wastes, overall waste reduction, and pollution prevention through the reduction of hazardous materials in health care facilities. OPPTA continues to encourage all Indiana health care facilities to become H2E Partners for Change.

OPPTA's Hospital Advisory Group meets quarterly to discuss waste management and other environmental issues. Mercury continues to be a major concern in health care facilities. As mercury spills receive increasing publicity, facilities are becoming more aware of the associated health, environmental and economic impacts of mercury. For more information about OPPTA's hospital initiatives, visit IDEM's Web site at www.IN.gov/idem/ctap/hospitals/.

Mercury

IDEM has had various initiatives to address mercury in the



environment for many years. These initiatives range from individual household uses of mercury to industrial air emissions that contain mercury. As a persistent, bioaccumulative toxin that is commonly found in Indiana fish, IDEM has taken a serious stance on increased education to prevent mercury from affecting our environment.

With the many IDEM initiatives addressing mercury, an agency-wide mercury Web site was created to collect all the mercury information for our state in one location. The Web site, www.IN.gov/idem/mercury, includes mercury data on air, water, waste disposal and more. It compiles IDEM's initiatives to reduce mercury exposure, including the Mercury Awareness Program, the Mercury Thermostat Reduction and Recycling Pledge Program, the Mercury Reduction and Recycling for Schools Pledge Program, the Mercury in Hospitals Program, and our newest program, the Dental Mercury Pledge Program.

● Mercury Spill Guidance

IDEM coordinated with ISDH and the Poison Control Center to determine the distinct roles of each agency when mercury spills occur. A guidance document was also created to assist with the cleanup of small household mercury spills. This guidance is available on IDEM's Web site at www.IN.gov/idem/mercury. Small mercury spills are a common occurrence, and this document has generated calls from citizens who have broken thermometers from states as far away as California. OPPTA has addressed 350 mercury inquiries since 2001.

● Dental Office Initiative

To assist Indiana dentists in eliminating elemental mercury from their offices, OPA, in partnership with ISDH, the Indiana Dental Association and Indiana solid waste management districts, teamed up to create a new dental initiative. As a result, an elemental (liquid) mercury sweep for Indiana dentists was held in early 2003. The sweep collected more than 240 pounds of elemental mercury from 52 dentists around the state. More information can be found on IDEM's Web site at www.IN.gov/idem/mercury/programs/dentalmercury.html.

● Mercury Deposition Program

Mercury can affect the central nervous system in adults and children, especially in its organic form (called methylmercury). Mercury in the atmosphere can be the result of human activities, such as emissions from power plants and municipal waste incinerators. Atmospheric mercury also can originate from natural processes such as forest fires and volcanoes.

According to U.S. EPA and research scientists, rain and snow are the primary ways mercury moves from the air to the earth's surface. This process is called atmospheric deposition. In 2000, IDEM entered into a cooperative agreement with the United States Geological Survey (USGS) to begin monitoring the atmospheric deposition of mercury in Indiana's environment.

IDEM and USGS have set up five mercury deposition stations throughout Indiana to collect information on both wet and dry deposition. Mercury has been detected at precipitation monitoring stations throughout North America. Data is currently being gathered from each of the five Indiana sites, and a comprehensive report is expected by the end of 2004. The main objectives of the monitoring program are to:

- Determine if mercury deposition in Indiana is uniform or influenced locally by emissions sources;
- Observe seasonal or annual trends in mercury concentrations and deposition in Indiana;
- Obtain baseline mercury deposition data prior to initiation of future regulatory controls;
- Support policy decisions for air quality, water quality and waste management programs;
- Obtain data that can be compared with other states;
- Determine the proportion of methylmercury in wet deposition;
- Determine the percentage of atmospheric deposition from wet deposition vs. dry deposition;
- Identify relations between mercury and other trace metals in wet deposition; and
- Determine which mercury emissions sources affect the monitoring locations and to what extent.

This monitoring program is coordinated through the IDEM Mercury Work Group, and is funded by USGS and IDEM's Office of Air Quality and Office of Water Quality. An overview of the IDEM/USGS monitoring program and Indiana monitoring network data summaries are available on IDEM's Web site at www.IN.gov/idem/mercury/air/.

● Mercury Awareness Program

As part of the Mercury Awareness Program, IDEM continues to work with industry partners, the Indiana Household Hazardous Waste Task Force and Indiana solid waste management districts to sponsor and implement mercury awareness and collection activities throughout Indiana.

In 2002, IDEM partnered with six solid waste management districts and one city to provide grants totaling \$153,805 to help collect and dispose of mercury, an environmental threat that can be found in many Hoosier homes. The seven entities receiving funds will serve as mercury hubs, or central collection points, for all solid waste management districts (SWMD) and communities. The seven mercury hubs are Allen County SWMD, Howard County SWMD, City of Indianapolis, Lake County SWMD, Monroe County SWMD, Spencer County SWMD and Wildcat Creek SWMD.

Since July 1, 2001, solid waste management districts have been required by state law to implement mercury collection programs for the public and small businesses. Mercury hubs provide a valuable service by collecting and storing mercury from program participants for final disposal by a qualified contractor. A summary of thermometer collection events can be found on IDEM's Web site at www.IN.gov/idem/ctap/mercury/exchanges.html.

● Mercury Thermostat Reduction and Recycling Pledge Program

The Mercury Thermostat Reduction and Recycling Pledge Program is one of several initiatives designed to voluntarily reduce the number of mercury-containing devices commonly found in Indiana homes. Since September 1997, nearly 200 heating, ventilation and air conditioning suppliers, contractors, mechanical engineers and architects have joined this voluntary program. In a cooperative agreement with the Thermostat Recycling Corporation, suppliers pay a one-time deposit fee of only \$15 for each collection container they wish to receive. Contractors pay nothing to join the program and receive perks such as uniform patches and customer brochures upon pledging to the program. Based on numbers recently released from the Thermostat Recycling Corporation, the program collected nearly 3,700 mercury-containing thermostats in 2002, making it the fourth most successful mercury-containing thermostat collection program in the nation.

The list of participating members of the Mercury Thermostat Reduction and Recycling Pledge Program can be found on IDEM's Web site at www.IN.gov/idem/mercury/programs/hvac/index.html.

● Mercury Thermometer Exchanges

Indiana's Mercury Thermometer Exchange Program, sponsored by Eli Lilly, Cinergy and IDEM, concluded in 2002. The program began in 2000 as a statewide initiative to educate Hoosier families about the dangers of mercury in their homes and how to properly dispose of mercury. Participating families received free digital thermometers, as well as additional information about mercury and its effect on the environment. Over the three years of this program, almost 9,000 mercury fever thermometers and more than 172 pounds of elemental mercury were collected and recycled at six



state-funded mercury collection hubs around the state. Many other mercury-containing items were collected, including sphygmomanometers, thermostats and large laboratory thermometers.

■ Metal Finishers

In March 2002, OPPTA began a 5-Star Environmental Recognition Program for Metal Finishers. Metal finishing facilities make a variety of products ranging from computer circuit boards to automotive parts. This sector has many pollution prevention opportunities to minimize hazardous waste and improve the efficiency of their process. Similar to the other IDEM 5-Star programs, the Metal Finishing 5-Star Program awards stars based on specific criteria which go above and beyond the regulations. OPPTA and the Indiana Clean Manufacturing Technology and Safe Materials Institute, together with industry representatives, municipalities/publicly owned treatment works and other interested parties, developed this program to recognize metal finishers that demonstrate exceptional environmental stewardship.

There are currently 13 metal finishers in Indiana that have received recognition. Participants in the 5-Star Environmental Recognition Program for Metal Finishers realize financial savings as well as environmental benefits ranging from decreased water use, resulting in lower water bills, to increased utilization of metals, resulting in fewer metals being discharged, and lower wastewater fees. Participants may petition the agency for reduced monitoring schedules. A bimonthly newsletter is also available for participants. This program is closely linked to Indiana's Strategic Goals Program (SGP), a national recognition program. The national SGP bronze level is the equivalent to earning two stars, the silver level is equivalent to earning three stars, and the gold level is equivalent to earning four stars. Facilities that earn all five stars are eligible to apply to the National Performance Track Program. Additional information on both the 5-Star Program and SGP are available on IDEM's Web site at www.IN.gov/idem/ctap/platers/5star/.

■ Publicly Owned Treatment Works

● Local Wastewater Treatment Assistance Efforts

OPPTA regional staff have initiated multiple projects aimed at improving publicly-owned treatment works' compliance in the southwest region. IDEM, together with ISDH and the Rural Community Assistance Pro-

gram, are promoting regionalized sewers for small incorporated and unincorporated communities. Their efforts include assisting communities in securing centralized collection and possible treatment to meet the communities' wastewater needs. Currently, these communities have no sewers and are served by inadequate individual septic systems that currently have a negative impact on Indiana waters.

IDEM Southwest Regional Office staff have also been working with wastewater officials in several area communities to assist with improved compliance with IDEM's water quality standards. Officials at wastewater treatment plants in a general state of disrepair have been working proactively with IDEM to resolve compliance issues through mutually acceptable Agreed Orders outlining specific plans for meeting compliance goals. IDEM continues to meet with these officials periodically to monitor progress and provide support.

In addition, OPPTA staff in the southwest region are helping local wastewater treatment directors develop long-term combined sewer overflow strategies for evaluation and separation protocol.

For additional information about wastewater treatment compliance assistance in the southwest region, call Larry Haag at (812) 380-2303.

● Publicly Owned Treatment Works Mercury Outreach

In July 2003, IDEM received a Pollution Prevention Incentives for States grant from U.S. EPA. IDEM will use the grant to help operators of publicly owned treatment works (POTWs) promote pollution prevention and source reduction measures for mercury to various industries in their local communities. Over the next two years, IDEM will develop an educational program that will include various outreach materials and training on sectors where mercury contamination may be present in effluent released to POTWs. IDEM formed a workgroup comprised of representatives from various POTWs, hospitals, dentists and more. The workgroup has begun reviewing outreach materials developed by IDEM.

■ School Clean Sweeps Program

With funding from U.S. EPA, IDEM and the Indiana Household Hazardous Waste Task Force (IHHWTF) assisted schools with the removal of unwanted, unstable and unused chemicals from their science laboratories. Hundreds of bottles of various chemicals were

removed from the respective schools as a result of the Clean Sweeps Program. In 2002, 11 schools received the free inventory services and had earmarked chemicals packed, transported and recycled, or disposed of, free of charge.

An IDEM chemist and the IHHWTF project director visited the schools during the summer of 2002 to go through chemical stockrooms and earmark chemicals to be removed by the contractor or simply disposed of on site. Chemicals not targeted for removal were reorganized to help the teacher establish a more efficient storage and utilization system. Teachers were also given information on how to perform common experiments with less hazardous materials and smaller quantities, but still achieve the same desired results.

Participating schools were also given other logistical and maintenance-oriented suggestions to improve the operation and maintenance of their labs. Suggestions included: purchasing a new flammable cabinet built of a material such as steel; installing smoke detectors and fire extinguishers; consolidating chemicals; having Material Safety Data Sheets and chemical inventories readily available; installing lips on shelves or obtaining doors with locking mechanisms; and ensuring the chemical storage room has its own ventilation system.

The only requirement for participation in the Clean Sweeps Program was for the school to be a good-standing member of IDEM's Mercury Reduction and Recycling Pledge Program for Schools and have all mercury and mercury-containing items removed from their campus. At the time of the program, 58 schools in Indiana worked with IDEM and their local solid waste management district to become, effectively, "mercury-free." Since the adoption of House Enrolled Act 1901, which prohibits mercury for educational purposes in schools, more than 400 schools have joined the Mercury Reduction and Recycling Pledge Program. A second grant from U.S. EPA is pending to continue the clean sweeps/mercury recycling programs. Funding to assist all 400 schools is not yet available.

To learn more about IDEM's Mercury Reduction and Recycling Pledge Program for Schools, visit IDEM's Web site at www.IN.gov/idem/enviroed/mercury/.

■ Southwest Indiana Illegal Burning Campaign

OPPTA staff in IDEM's Southwest Regional Office have organized the Indiana Illegal Burning Campaign.

IDEM and 28 solid waste management districts have developed an education and awareness program highlighting the environmental, health and financial hazards that result when citizens burn trash in backyard burn barrels. A series of outreach meetings with elected officials, fire fighters, civic organizations and schools, and local media are planned through 2004.

■ Vehicle Maintenance

IDEM's 5-Star Environmental Recognition Program for Vehicle Maintenance Shops continues to recognize those shops going above and beyond compliance by implementing pollution prevention and recycling activities such as recycling antifreeze, metal parts, and batteries, and offering environmentally-friendly batteries to consumers. Initiated in 2001, this 5-Star Program has 58 participants throughout Indiana. IDEM offers the Vehicle Maintenance Compliance Manual to assist vehicle maintenance shops with all applicable environmental regulations that apply to their business activities. This manual and other information about vehicle maintenance outreach can be found on IDEM's Web site at www.IN.gov/idem/ctap/vehicle/.

IDEM's Pollution Prevention Partnerships

Partnering with groups interested in promoting pollution prevention has been essential to the success of IDEM's pollution prevention progress. Below is a description of several ongoing partnerships IDEM has had to promote pollution prevention in Indiana.

■ Clean Manufacturing Technology Board and Institute

The Pollution Prevention Board was created by statute in 1990 and re-established in 1997 as the Clean Manufacturing Technology Board (CMTB). The Board is legislatively directed to support and maintain Indiana's Clean Manufacturing Technology Program and provide policy direction for future endeavors. Its primary function is to oversee the operation of the Indiana Clean Manufacturing Technology and Safe Materials Institute (CMTI). The CMTB meets quarterly and is dependent upon OPPTA staff for implementation of its mission.



CMTI provides technical assistance and education services to a variety of Indiana's industry. Formerly the Pollution Prevention and Safe Materials Institute, CMTI began operations on January 1, 1994. OPPTA and CMTI often share resources to provide dual leadership for technical and compliance assistance initiatives for pollution prevention training and outreach to Indiana industry. CMTI is very involved in various pollution prevention programs at IDEM, including the Governor's Awards for Environmental Excellence, the Partners for Pollution Prevention, and the Department of Defense/P2 Partnership. For additional information, please visit CMTI's Web site at www.ecn.purdue.edu/CMTI/.

■ Department of Defense Pollution Prevention Partnership

In 2000, the Department of Defense, U.S EPA Region 5 and IDEM formed a voluntary partnership to discuss pollution prevention opportunities. The partnership focuses on strategies to reduce the sources of pollution and waste in day-to-day operations of military installations. Efforts over the past four years have continued to include pollution prevention information exchanges, training and award programs to increase environmental awareness of military employees and personnel. To read about the successes the group has had and to learn more about this partnership, please visit IDEM's Web site at www.IN.gov/idem/oppta/p2/dod/.



■ Kentuckiana Pollution Prevention Project

In the spring of 2002, the Kentuckiana Pollution Prevention Project was formed to address pollution prevention and compliance-related issues specific to the Louisville Metropolitan area, including Floyd, Clark and Harrison counties in Indiana. This group consists of assistance representatives from both Kentucky and Indiana, including the Kentucky Pollution Prevention Center (KPPC), Jefferson County Air Pollution Control District, IDEM's OPPTA, Kentucky's Small Business Assistance Program and the Metropolitan Sewer District.

A Web site hosted by KPPC was developed and includes assistance resources, frequently asked questions and pollution prevention manuals, and links for

various industrial sectors. The project was presented at the National Pollution Prevention Roundtable in April 2003.

The Kentuckiana Pollution Prevention Project's future goals include hosting local workshops, adding more information to the Web site, and organizing an open forum after the Louisville metro merger is complete. The open forum will highlight all local pollution prevention and compliance resources in the metro area. For more information, visit KPPC's Web site at www.kppc.org/resources/kp3.

■ National Environmental Performance Track Program



In June 2000, OPPTA was a charter member in

U.S. EPA's National Environmental Performance Track Program. This voluntary partnership program recognizes and rewards private and public facilities that demonstrate strong environmental performance beyond current requirements to achieve environmental excellence. Indiana currently has nine facilities enrolled in this prestigious program.

Eligibility requirements include having an Environmental Management System in place, a history of sustained compliance, a commitment to continuous environmental improvement, and community outreach. Members must also complete an annual performance report demonstrating environmental accomplishments, continued high level of environmental performance, and maintenance of Performance Track membership criteria. For additional information on Performance Track, please visit IDEM's Web site at www.IN.gov/idem/oppta/performance-track/.

■ Indiana Partners for Pollution Prevention

IDEM formed the Partners for Pollution Prevention in 1996 to assist industry in sharing pollution prevention successes and to advise the agency on pollution prevention policy and programs. Membership consists of approximately 40 businesses, organizations and individuals (see Table D)



and was initially limited to those facilities that have received the Governor's Award for Environmental Excellence, IDEM Pollution Prevention Challenge Grants, or had pledged to help meet the Governor's Toxics Reduction Challenge. In August 2003, the Partners opened membership to any facility willing to accept and meet the Partners Pledge. The Partners meet quarterly to network, exchange pollution prevention ideas, and help others achieve the state's pollution prevention goals.

In 2003, the Partners executive committee increased its efforts to review current membership activity, encourage increased participation in quarterly meetings, and promote the program to potential new members such as past Governor's Awards for Pollution Prevention applicants. The committee developed an annual survey to gain knowledge about members' pollution prevention activities and success stories.

In addition to quarterly meetings, the Partners, in cooperation with IDEM, plan the annual Indiana Pollution Prevention Conference and Trade Show. The 5th Annual Pollution Prevention Conference was held on October 23, 2002, in Indianapolis. Nearly 120 people attended. The theme for the 2002 Pollution Prevention Conference was "Facing the Challenge: Facing challenges can open doors to improved profits." The 6th Annual Pollution Prevention Conference and Trade Show was held October 20, 2003, at Brown County State Park in Nashville. Nearly 200 people attended. The theme for the 2003 Pollution Prevention Conference was "Doing Good is Good for Business." Highlights included the plenary speaker Gary Ross, from Toyota Motor Manufacturing, North America, Inc., who spoke about pollution prevention initiatives Toyota has implemented to stay competitive in a global climate, and a lively speech by Cam Metcalf from Kentucky Pollution Prevention Center, who motivated attendees to ask if doing good was good enough. Past Governor's Awards recipients highlighted their award-winning pollution prevention projects, and vendors were available to talk about the latest pollution prevention technologies. Other sessions included Waste Minimization, Ozone and Non-attainment in Indiana, Industrial Stormwater Pollution Prevention Plans, P2 Audits at Your Facility, Industrial Energy Efficiency and Office P2. IDEM Commissioner Lori F. Kaplan spoke about the state of Indiana's environment. Slides from both conferences can be downloaded from IDEM's Web site at www.IN.gov/idem/oppta/p2/partners/conference/. For additional information on the Partners for Pollution Prevention, visit IDEM's Web site at www.IN.gov/idem/oppta/p2/partners/.

Indiana Partners for Pollution Prevention

Altec Engineering, Inc.
 Arrowhead Plastic Engineering, Inc.
 Benchmark Products, Inc.
 Best Access Systems
 BP Amoco Oil
 Cinergy Corporation
 City of Elkhart Public Works & Utilities
 Crane Naval Surface Warfare Center
 Criterion Catalysts & Technologies L.P.
 CTS Corporation Resistor/Electrocomponents
 Delphi Delco Electronics Systems
 Eli Lilly and Company
 Eli Lilly and Company - Tippecanoe Labs.
 Environmental Management Institute, Inc.
 Fujitsu Ten Corp. of America
 GE Appliances
 GE Plastics Mt. Vernon, Inc.
 General Seating of America
 GM Powertrain Bedford Castings
 I/N Tek and I/N Kote
 Indiana Clean Manufacturing Technology
 and Safe Materials Institute
 Indiana Department of Environmental
 Management
 Indianapolis Casting Corp.
 Inland Buildings
 International Truck & Engine Corp.
 Ispat Inland Inc.
 Kimball Electronics Auburn
 Madison Chemical Co., Inc.
 Nachi Technology, Inc.
 NCM Chassis Systems, L.L.C.
 NiSource
 Ogden Martin Systems of Indianapolis
 Reilly Industries, Inc.
 Rolls-Royce Corporation
 United Technologies Carrier
 Uniseal, Inc.
 Utilimaster Corporation
 Visteon Corporation

National Waste Minimization Program

To build on the progress made with the Governor's Toxic Reduction Challenge, OPPTA is working in conjunction with U.S. EPA to promote the National Waste Minimization Partnership Program, a new voluntary program that fosters partnerships between U.S. EPA and industry.

U.S. EPA is challenging industry to reduce the generation of 30 priority chemicals most commonly found in hazardous waste by 50 percent by 2005. These are persistent chemicals that contaminate our land, air, water, plants and animals. Achieving this goal will eliminate almost 76 million pounds of priority chemicals, saving money and energy.

To accomplish the goal of reducing priority chemicals, U.S. EPA is forming partnerships with companies, organizations, states and tribes. Waste minimization techniques such as substituting chemicals, changing manufacturing processes, reusing products and recycling activities will be used to eliminate priority chemicals in hazardous waste. In addition to improving the environment, these techniques improve efficiency and cut costs in manufacturing operations and waste management.

OPPTA has assisted this effort through mailings advertising the program, outreach to Toxic Release Inventory Reporters and workshops. For additional information on this program, please visit U.S. EPA's Web site at www.epa.gov/wastemin/.

WasteWise



WasteWise is a U.S. EPA waste reduction program that helps organizations save money by reducing purchasing costs and waste disposal needs. WasteWise provides free technical assistance to organizations by helping develop, implement and measure waste reduction

activities. U.S. EPA has also developed the WasteWise Endorser Program. Endorsers are state and local government agencies, trade associations, non-profit organizations, and businesses that encourage their members and constituents to realize that reducing solid waste makes good business sense. Indiana is home to 33 WasteWise partners and endorsers, including: large corporations, small and medium sized businesses, schools, colleges, universities, hospitals,

state and local governments, and other institutions. In April 2003, OPPTA became a WasteWise Endorser.

For information on the WasteWise Program, a list of Indiana's partners and endorsers, how to become a partner and related links, visit IDEM's Web site at www.IN.gov/idem/ctap/Wastewise/wwhomepage.pdf.

Governor's Awards for Environmental Excellence Program

The Governor's Awards for Environmental Excellence have given manufacturers, businesses, organizations, vendors, educators, and dedicated individuals recognition for their outstanding environmental initiatives. The awards also provide an opportunity to demonstrate these initiatives to others. In the past, Governor's Awards were awarded separately for Pollution Prevention and Recycling. In 2002, the award programs were combined and new award categories were created to establish the Governor's Awards for Environmental Excellence. These new categories include Pollution Prevention and Source Reduction, Recycling and Reuse, Greening the Government, Education and Outreach, Land Use, and Energy and Renewable Resources.

The first Governor's Awards for Environmental Excellence were presented on September 27, 2002. The second Governor's Awards for Environmental Excellence were presented on October 30, 2003. Both award ceremonies occurred during the annual Governor's Conference on the Environment, with former Governor O'Bannon attending in 2002 and Governor Kernan attending in 2003. Table E shows the award winners in the Pollution Prevention and Source Reduction category for both 2002 and 2003. For descriptions of the award-winning projects, please visit IDEM's Web site at www.IN.gov/idem/oppta/govawards/.

Table E

Governor's Awards for Environmental Excellence

POLLUTION PREVENTION AND SOURCE REDUCTION CATEGORY

2002 Award Winners

Fairfield Manufacturing Company, Inc.
Lafayette, Tippecanoe County

GE Plastics Mt. Vernon, Inc.
Mt. Vernon, Posey County

Nishikawa Standard Co., New Haven Division
New Haven, Allen County

NTN Driveshaft, Inc.
Columbus, Bartholomew County

Reilly Industries, Inc.
Indianapolis, Marion County

Toyota Motor Manufacturing, Indiana, Inc.
Princeton, Gibson County

Valeo, Inc.
Engine Cooling Automotive Division
Greensburg, Decatur County

2002 Honorable Mentions

Kimball Electronics Auburn
Auburn, Dekalb County

Monaco Coach Corporation
Mishawaka, St. Joseph County

2003 Award Winners

Whirlpool Corporation
Evansville, Vanderburgh County

Uniseal, Inc.
Evansville, Vanderburgh County

Toyota Motor Manufacturing, Inc.
Princeton, Gibson County

Greening the Government

Indiana's Greening the Government Program focuses on comprehensive environmental efforts for state of Indiana government facilities. Established in 1999 by an executive order, these Greening efforts include various source reduction, reuse, recycling, environmentally preferable purchasing, pollution prevention, energy efficiency and transportation initiatives for state employees and agencies. In addition, employee education and communication networks are key to implementing these efforts. For complete program details, visit the Web at www.IN.gov/greening. Over the past two years, the Greening Program has worked on several pollution prevention projects.

- ❶ The Greening Program continues to work with the Indiana Department of Administration's Procurement Office to review and evaluate opportunities to purchase more environmentally preferable products via quantity purchase agreements. For example, IDEM has worked on technical environmental attributes of specific quantity purchase agreement products, such as cleaning chemicals. Integrated pest management language has also been developed for pest control service contracts. Specifications also require Energy-star rated computers and printers for new purchases.
- ❷ In the construction area, Indiana state government continues to move in the "green" building direction. Two new state buildings currently under construction are incorporating the United States Green Building Council's Leadership in Energy and Environmental Design system. These projects are designed from the beginning to minimize negative environmental impacts, both during construction and for the expected lifetime of the buildings.
- ❸ The Greening Program worked with IDEM to educate state agencies and Prison Enterprises Network Products about the health and environmental issues of chromate copper arsenate-treated lumber. Agencies were provided with a self-assessment tool. A statewide agency quantity purchase agreement for paints includes maintenance products designed to seal CCA-treated lumber products which are currently in use.
- ❹ The Greening Program worked in partnership with IDEM and the City of Indianapolis to host a "Go Digital" Mercury Thermometer Exchange Program for state employees and

agencies on November 19, 2003, at the Indiana Government Center.

- ❺ The Greening Program worked with the Indiana Department of Commerce on the "Drive Green, Save Green" Ethanol-85 incentive program to encourage state fleet vehicles to use more E-85 fuel in alternative-fueled vehicles. In addition, the Greening Program worked with both the Indiana Department of Commerce and the City of Indianapolis to develop a new city-owned Ethanol-85 refueling site where state of Indiana fleet vehicles can also refuel. This new site, located just south of the Indiana Government Center in Indianapolis, opened in April 2003.
- ❻ The Greening Program worked with the Indiana Department of Transportation to install and promote the use of bicycle racks at the Indiana Government Center campus.

Pollution Prevention Training for OPPTA Staff

OPPTA continues to participate in educational opportunities for staff on new pollution prevention information and techniques. Recently, staff took advantage of the following training opportunities:

In January 2003, OPPTA staff attended the National Toxic Release Inventory State Contacts Conference in San Francisco. This week-long training provided information on changes to TRI reporting, and outreach and pollution prevention efforts other states are providing. Information from this conference was communicated to Indiana TRI reporters during the 2003 reporting season. Also, during this conference, IDEM and the Michigan Department of Environmental Quality collaborated to apply for a grant from U.S. EPA to assist with TRI electronic reporting via the Internet. The application did not receive grant funding, but IDEM has been able to use a database Michigan developed to collect TRI data.

In March 2003, OPPTA staff attended U.S. EPA's Toxic Release Inventory Workshop for TRI Reporters in 2002. This training provided a background on data OPPTA's Pollution Prevention Branch collects related to TRI. Because many IDEM staff were new to TRI in 2003, this was an excellent training opportunity as well as a time to learn about changes in the 2002 reporting year.

In July 2003, OPPTA staff attended a three-day U.S. EPA training in Cincinnati on new U.S. EPA

pollution prevention materials available to assist industry with a specific focus on environmental management systems. Staff learned about various decision-making processes as well as all the components of an environmental management system.

Indiana Materials Xchange

The Indiana Materials Xchange, first published as the Waste Exchange in 1993, is used to disseminate information on surplus and waste materials, either available from or wanted by, industrial and commercial entities. IMX was created under the authority of IC 13-14-1-1, and provides a method for companies to prevent pollution by making available usable material that may have otherwise ended up in a landfill. It is the industry version of the saying “One person’s trash is another person’s treasure.” Until July 2002, the Indiana Materials Xchange was published as a quarterly newsletter and mailed to interested parties throughout Indiana and the nation. Due to rising production costs and the environmental impact of distributing so many paper copies, IMX was transitioned to a Web-based program. Listings are submitted and accessed through the IMX Web site at www.IN.gov/idem/imx and are now updated monthly instead of quarterly. An IMX listserv was created to enable OPPTA to immediately alert interested parties to new postings. Companies wishing to exchange materials contact each other directly and are asked to report successful exchanges to OPPTA. This paperless system prevents pollution associated with distributing printed materials and provides easy access to IMX listings. Since it became Web-based, on average more than seven new entries are posted each month. Web hits to the IMX site have increased more than 100 percent. OPPTA will analyze program activities in 2003 to determine customer needs based on past usage and input.



Measuring Pollution Prevention Progress in Indiana

Pollution Prevention Assistance Survey Results



OPPTA staff provide many types of assistance, most of which falls under the Compliance and Technical Assistance Program as confidential assistance.

Outreach efforts under CTAP include conducting educational workshops, providing confidential site visits and confidential assistance via telephone, and developing recognition programs, compliance and pollution prevention assistance manuals, and fact sheets. Although much of this work is focused on compliance assistance, pollution prevention assistance is also addressed in most instances. For the past several years, CTAP has been tracking the assistance it provides, and the results, as related to pollution prevention, are provided here. The complete CTAP 2003 report can be viewed on IDEM's Web site at www.IN.gov/idem/ctap/03annualreport.pdf.

Small Business Assistance Contacts

Table F shows significant progress in reaching and assisting Indiana units of government, businesses and citizens. Since 1996, assistance efforts (see Total Contacts below) have increased every year except in 2002, when the state's fiscal situation negatively impacted CTAP. Current projections indicate that this upward trend will return in 2003. The downward trend in mailings and publications continues from 2002 due to CTAP's focus on electronic publication and outreach as part of IDEM efficiency measures. Despite the decrease in mailings and publications, the number of active contacts, including telephone calls, site visits and "hits" to the CTAP home page (www.IN.gov/idem/ctap/) are all on pace to increase, by 19 percent, six percent, and 16 percent, respectively when compared to 2002 totals.

In 2002 and 2003, budget cuts and staff vacancies in OPPTA impacted CTAP's outreach efforts. However, CTAP continues to work with the Indiana Department of Commerce on a controlled marketing plan of the program. In addition to this collaborative relationship,

Table F

OPPTA Small Business Assistance Contacts

Contact Type	1996	1997	1998	1999	2000	2001	2002	2003*
Telephone Assistance	2,254	3,200	2,770	2,785	2,972	2,990	3,122	1,853
Onsite Visits	411	138	155	245	296	521	913	482
Seminars/Workshops	80	565	764	1,491	2,485	2,956	2,002	3,300
Publications**	2,133	3,364	6,724	4,290	10,985	12,500	8,000	3,200
Home Page Hits	1,318	600	1,574	3,691	6,313	8,365	10,566	6,106
Teleconferences	0	0	67	0	0	0	0	0
Mailings	1,050	225	6,935	10,730	13,908	13,000	8,800	3,000
Total Contacts	7,246	8,092	18,989	23,232	36,758	40,332	33,403	17,941
Staff Members (full-time employees)	12	12	12	14	12	11	8	8

**Includes guidance manuals, fact sheets, brochures and annual reports.

* Covers only the first half of 2003 (January - June)

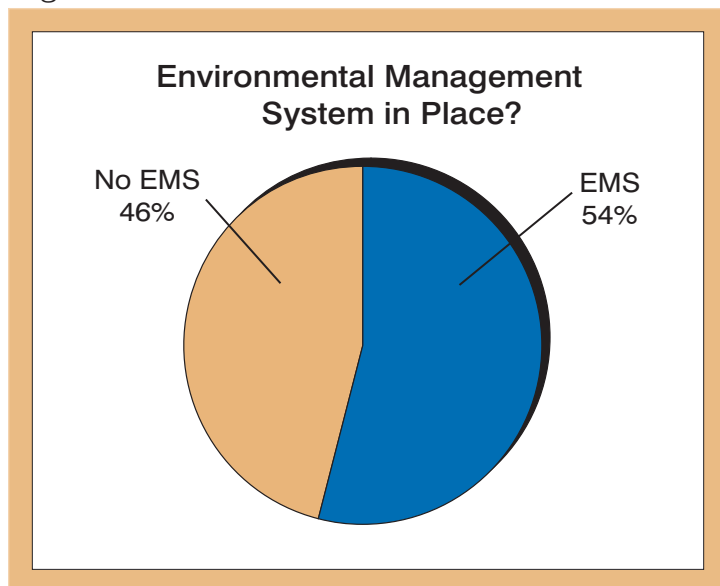
CTAP is working with the Indiana Department of Labor's Bureau of Safety Education and Training to distribute information on both agencies' programs.

■ Measuring Results

In January 2001, CTAP offered an online customer satisfaction survey (www.IN.gov/idem/oppta/survey.html). The survey takes fewer than five minutes to complete and provides CTAP with valuable information about the level of customer service provided. The following sections focus on data compiled from these surveys through July 1, 2003. Among the questions asked was, *"Do you have an environmental management system in place?"*

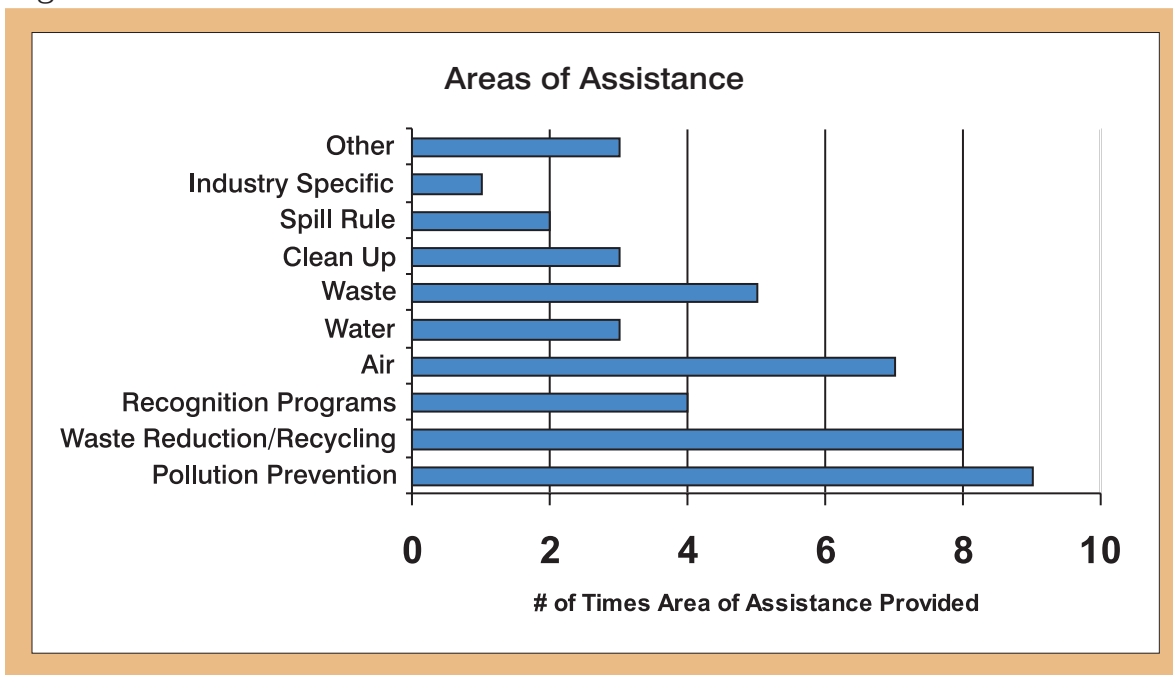
Figure 5 shows that 54 percent of survey respondents do have an environmental management system in place. Reasons for implementing an EMS ranged from "good business practice" to "required by corporate/head office." CTAP staff has assisted eight Indiana businesses that implemented an EMS based on International Organization for Standardization principles.

Figure 5



"Areas of Assistance" is tracked through the CTAP database. Figure 6 depicts the results from the surveys submitted through July 1, 2003. An assistance effort will typically include more than one area of focus. For example, a customer may have originally contacted CTAP for assistance in complying with hazardous waste

Figure 6



rules; however, during the assistance effort, the CTAP staff person provided the customer with pollution prevention information to reduce the amount of hazardous waste generated. Based on the surveys submitted, pollution prevention and waste reduction were the most often provided area of assistance.

Another question asked was, “*What information did OPPTA or CTAP send you?*” Figure 7 shows that guidance documents from various programs were requested the most. Pollution prevention information ranked as the second most provided piece of information. This information is typically related to sector-specific improvements such as better management practices or product substitution information.

■ CTAP Site Visit Surveys

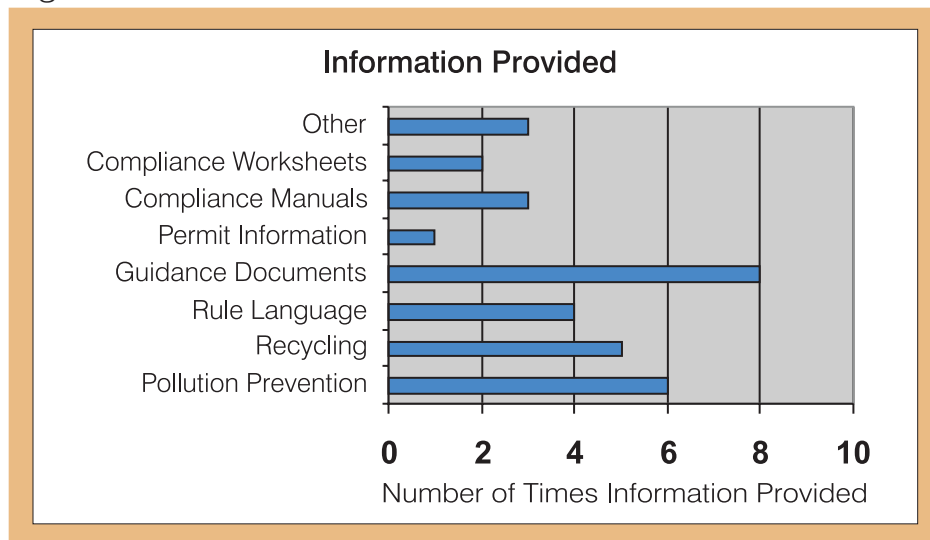
At the beginning of 2003, CTAP implemented a new system to better understand the service provided to its customers. Surveys are distributed to representatives of Indiana businesses that have been provided a site visit for pollution prevention and/or compliance assistance. The site visit survey is available on IDEM’s Web site at www.IN.gov/idem/ctap/survey/.

CTAP staff developed an automated system to facilitate the collection of these surveys. Six months after any on-site visit, CTAP sends a survey to facilities that received a visit. The six-month timeframe was chosen because most suggestions for pollution prevention or compliance can be implemented, and results obtained, within that timeframe. Six months also serves as a good reminder timeframe for the facility to follow-up with CTAP if additional services are needed.

The site visit survey has two sections. The first section is used for compliance assistance site visits. Information requested in this section includes which areas of compliance were reviewed, what types of issues were identified, whether the issues were corrected, how the issues were corrected, and what environmental impact occurred because of actions taken.

The second part is used for pollution prevention assistance site visits. Information requested includes which pollution prevention activities were implemented, what capital costs were incurred, what cost savings resulted from implementation, and what environmental benefits were realized. The following graphs show the results from the 12 surveys completed from January 2003 to July 2003 as related to pollution prevention.

Figure 7

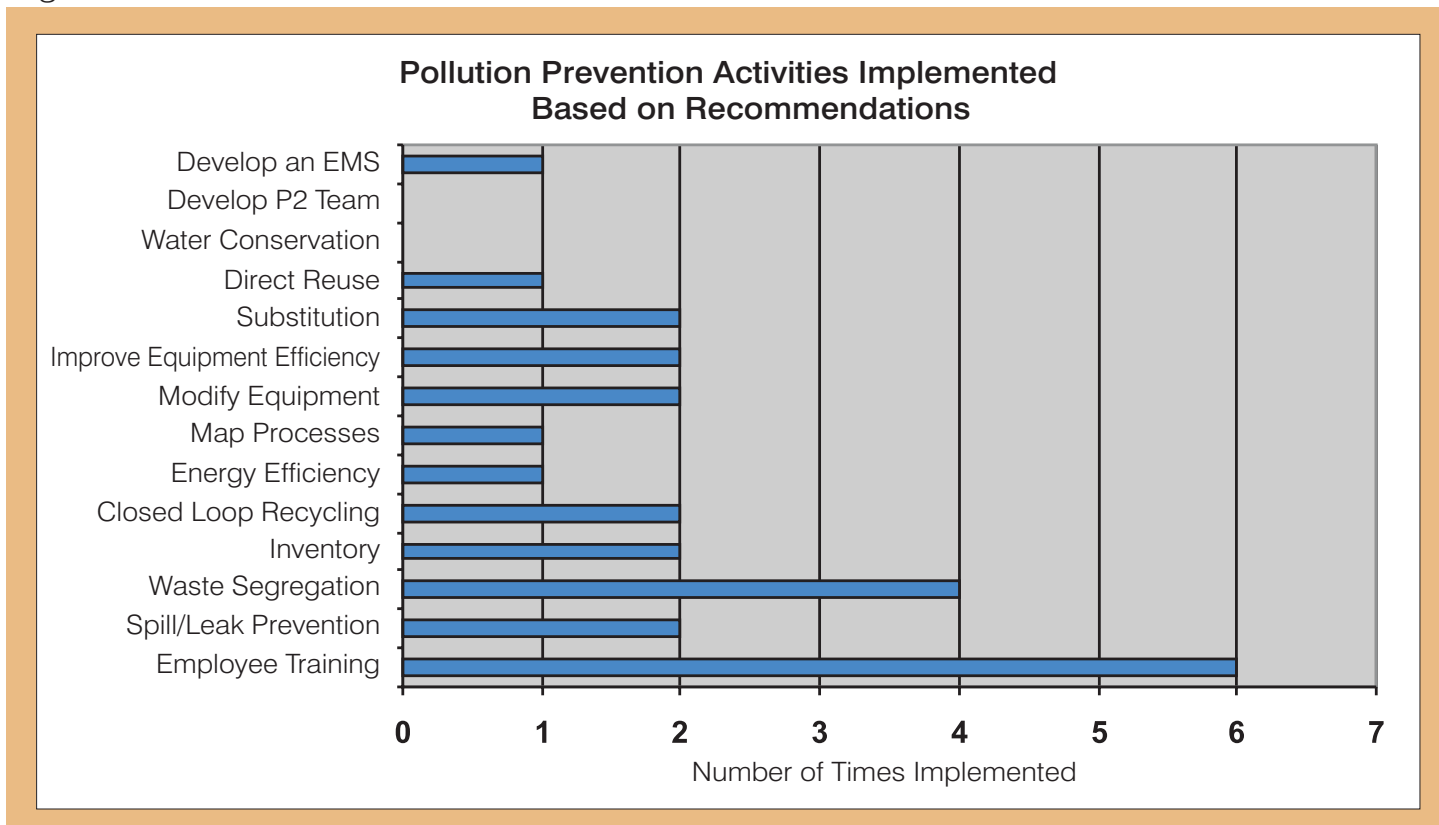


Another question asked was, “*What pollution prevention activities or operational changes, if any, were implemented at the facility based on suggestions from CTAP staff?*” Figure 8 on page 24 shows the different pollution prevention activities an entity may have been suggested to implement. During the first data collection period of 2003, OPPTA realized a survey return rate of 17 percent. Out of those that responded to the survey, each facility implemented two pollution prevention activities. Employee training and waste segregation were the recommendations most implemented.

■ Environmental Benefits of the CTAP Program

The survey also asked, “*What environmental benefits were derived from implementation of the project?*” Forty-two percent of respondents listed compliance with environmental regulations as an environmental benefit from implementing the pollution prevention project. Seventeen percent of respondents found that implementing pollution prevention lead to decreased volatile organic compound emissions, increased solid waste recycling, decreased water consumption and decreased energy consumption.

Figure 8



Toxic Release Inventory Results

Each year, more than 1,000 Indiana facilities submit toxic release data to OPPTA's Pollution Prevention Branch under the requirement of the Toxic Release Inventory. The Pollution Prevention Branch maintains continual quality assurance over the data and each year provides an update on the state's toxic chemical release trends. A Web-based TRI database is also available at www.IN.gov/idem/oppta/tri/search.html for the public to view toxic releases throughout the state. Because facilities report releases of the previous year, the most current data available at this time is for 2001 releases. A complete report on the 2001 Toxic Release Inventory in Indiana is available on IDEM's Web site at www.IN.gov/idem/oppta/tri/2001trends.pdf.

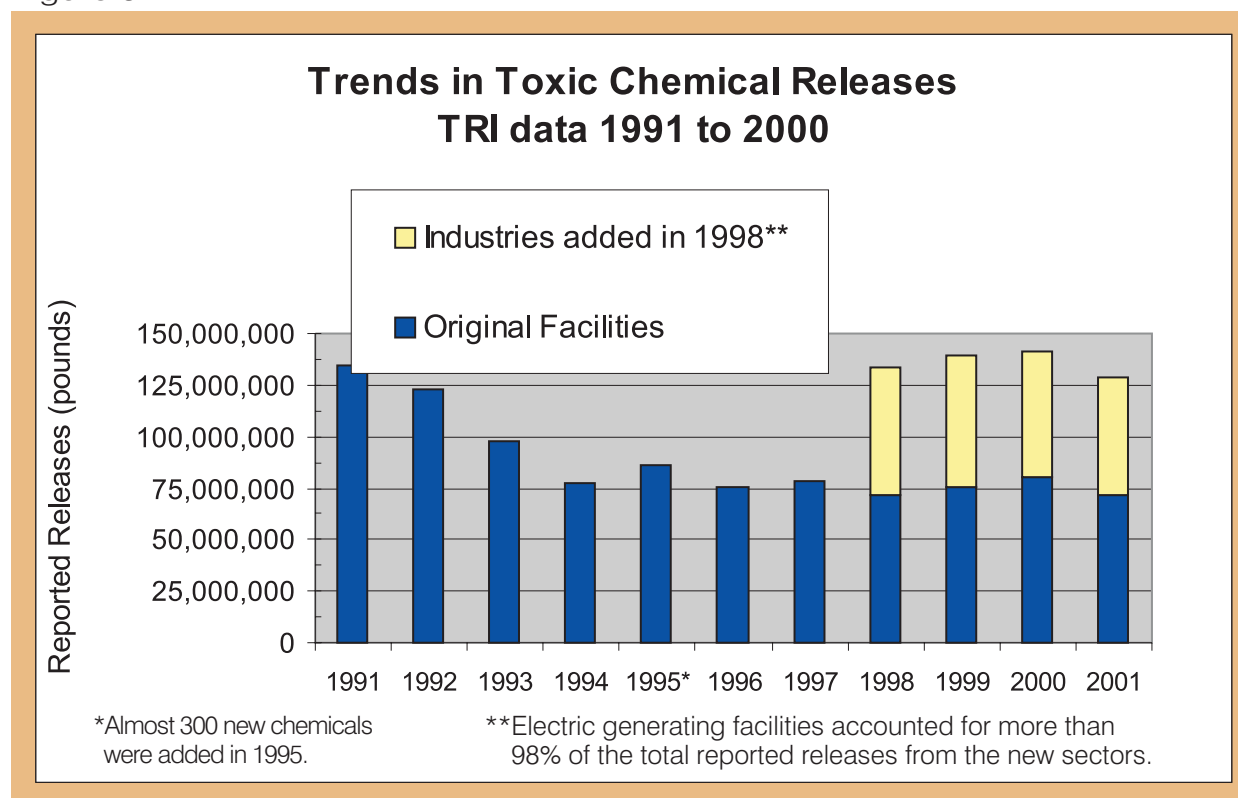
Overview and Trends in Toxic Chemical Releases

In 2001, Indiana's statewide total toxic chemical releases decreased from 141.6 million to 128.7 million pounds (see Figure 9 on page 25). This 12.9 million pound decrease was possibly due to a contraction in the state's economy. The 9.1 percent decrease in releases closely correlates with the U.S. Depart-

ment of Commerce Bureau of Economics statistics, which indicate the manufacturing portion of the Indiana gross state product as down 9.2 percent in 2001 as compared to 2000. Although many of the reductions in releases were likely due to the economy, as described earlier in this report, there were significant reductions due to pollution prevention efforts made by industries around the state. This includes the large styrene reductions made by the fiber-reinforced plastics industry and the continual nine-year decrease in releases of dichloromethane (methylene chloride).

The reductions of both styrene and dichloromethane are due in large part to IDEM pollution prevention outreach over the past several years. IDEM identified styrene and dichloromethane as toxic chemicals that needed further reduction outreach due to their known or potential carcinogenic status. In 2001, a state rule was developed using pollution prevention technologies to significantly reduce styrene emissions from open molding reinforced plastic parts manufacturers. This rule went into effect March 2001 and has helped reduce reported styrene emissions from 5.7 million pounds in 2000 to 4.8 million pounds in 2001 (see Figure 10 on page 25). As referenced earlier in this report, it is believed the actual reduction of styrene releases in Indiana is actually almost 4 million pounds since 1996.

Figure 9



IDEM began outreach to the flexible polyurethane foam manufacturers in 1997 in an effort to reduce their use of dichloromethane. In 2001, a federal rule for this industry began and further reduced emissions from a high of almost 10 million pounds in 1992 to less than 2.7 million pounds in 2001. The graph below shows the reduction trends of these two chemicals. The initiatives included rule making, pollution prevention and compliance assistance outreach, and increased inspection efforts.

Environmental waste generated by Indiana facilities decreased by 7.8 million pounds, or less than 1 percent, from 2000 (1.026 billion pounds) to 2001 (1.018 billion pounds). Waste management activities reported to TRI include recycling, burning for energy recovery, and destruction of the toxic chemical through treatment and disposal in landfills.

For additional information on toxic releases in Indiana, please refer to the Governor's Toxic Reduction Challenge information on pages 5-7 or to the TRI Web site at www.IN.gov/idem/oppta/tri/.

Figure 10

